Recent Changes in Unemployment Insurance
Recipiency in Washington State

By
Dr. Wayne Vroman
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The unemployment insurance (UI) program in Washington State has traditionally been described as a liberal program with high recipiency and high weekly benefits relative to the programs in many other states. This has changed in the past few years with both the recipiency rate and the replacement rate (the ratio of weekly benefits to weekly wages) exhibiting measurable decreases.

This report describes the behavior of UI recipiency rate in Washington and examines the factors responsible for the recent decrease in recipiency. It concludes that legislative changes and changes in program administration have both contributed to the decrease in recipiency. However, estimating the exact contribution of various legislative and administrative changes to reduced recipiency is difficult because our ability to understand all factors that cause changes in recipiency is limited. As will be seen below, a regression analysis of recipiency leaves most of the variation in recipiency unexplained.

Measuring Recipiency

Two common measures of the UI recipiency rate are the ratio of UI claimants (or insured unemployment) to total unemployment and the ratio of weekly beneficiaries to total unemployment, respectively termed the IUTU and WBTU ratios. The measures of insured unemployment and weekly beneficiaries are derived from UI program operating statistics and are reported by all states to the Office of Workforce Security (OWS) of the U.S. Department of Labor. Insured unemployment (IU) counts persons who have filed claims and are awaiting decisions and are serving waiting periods as well as recipients. Weekly beneficiaries include just persons actually receiving benefits. Recipients include persons receiving part week benefits as well as full weeks of UI benefits.

Estimates of total employment and total unemployment (TU) for each state are generated by the Local Area Unemployment Statistics (LAUS) program of the U.S.

Department of Labor's Bureau of Labor Statistics (BLS). The BLS estimates of total unemployment are made monthly for each state. Thus IUTU and WBTU ratios can be traced for multi-year periods for each state. Higher ratios identify states where relatively more of the unemployed apply for and receive UI benefits. The ratios are usually measured for the regular UI program, the program that provides up to 26 weeks of benefits to eligible UI claimants.[1]

Chart 1 displays IUTU and WBTU ratios for Washington between 1967 and 2006. During these 40 years, the averages for IUTU and WBTU ratios were 0.448 and 0.383 respectively. During the same 40 years, the analogous national IUTU and WBTU ratios were 0.365 and 0.317. Unemployed workers in Washington have traditionally been more likely to receive UI benefits and Washington's long-run higher recipiency rate has averaged 6 to 8 percentage points or some 21-22 percent above the national average.

Chart 1 shows vividly that recipiency rates are highly volatile. During the 40 years, the range for the IUTU ratio was from 0.317 to 0.572 while the WBTU ratio ranged between 0.260 and 0.491. As will be discussed shortly, this variability is not very successfully captured by regression analysis.

The other obvious feature in Chart 1 is the sharp decrease in recipiency that occurred between 2002 and 2006. Both ratios decreased some 0.17-0.18. The only other instance of such a large decrease during these 40 years was the decrease between 1974 and 1979. While the IUTU ratio actually experienced a larger reduction during these years (0.233), the decrease in the WBTU ratio was almost the same (0.189 during 1974-1979 versus 0.187 during 2002-2006). Chart 1 shows clearly that the recent years of low recipiency, especially 2005 and 2006, have not occurred in Washington in more than 20 years. Note, however, that the recipiency rates of 2003 and 2004 were not that unusual when compared to several years during the 1980s and even years before the 1980s.

Regression Analysis of the Recipiency Rate

The recipiency rate in UI has been examined in several past studies including papers by Burtless (1983), Corson and Nicholson (1988), Blank and Card (1993),

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[1] With the decrease in maximum potential weeks of benefits from 30 weeks to 26 weeks in Washington in 2004, the only states with maximums above 26 weeks in 2007 are Massachusetts at 30 weeks and Montana at 28 weeks.

Vroman (2002) and most recently by the Government Accountability Office (2006).[2] The past studies show that recipiency depends upon the business cycle. When the economy enters a recession and unemployment increases, the mix of unemployment changes to include an increased share of workers who are job losers, i.e., persons who become unemployed through decisions by employers to terminate their services (on a temporary of permanent basis). Job losers are typically experienced workers whose past earnings and circumstances of becoming unemployed mean they will be eligible for UI benefits. Because the share of the unemployed who are job losers increases, the UI recipiency rate typically increases in the early stages of a recession. As the recession lengthens and unemployment duration rises, more and more workers use up (exhaust) their UI entitlements and this causes the recipiency rate to decrease. High current unemployment initially increases recipiency but then reduces recipiency through the effects of exhaustions. In terms of regression analysis to explain the UI recipiency rate, the slope coefficient on the current unemployment rate (or TUR) is typically positive while the coefficient on the lagged unemployment rate is usually negative.

Over longer periods of time, the average UI recipiency rate has undergone important changes. Recipiency decreased in the early 1980s while in more recent years (the past decade) it has increased in several states. These factors are captured in the present analysis with dummy variables. A dummy variable equals zero for certain periods and unity in other periods. One dummy variable used here (D1981) equals zero in years before 1981 and unity in 1981 and later years. The D1981 dummy tests for a downward shift in recipiency in the early 1980s. This topic received attention in the Burtless (1983), Corson and Nicholson (1988) and Blank and Card (1991) papers cited in footnote 2.

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[2] See Burtless, Gary. 1983. "Why is Insured Unemployment So Low?" Brookings Papers on Economic Activity, (1983:1), pp. 225-249; Corson, Walter and Walter Nicholson. 1988. "An Examination of Declining UI Claims During the 1980s," Unemployment Insurance Occasional Paper 88-3, (Washington, D.C.: U.S. Department of Labor, Employment and Training Administration); Blank, Rebecca and David Card. 1991. "Recent Trends in Insured and Uninsured Unemployment: Is there an Explanation?" Quarterly Journal of Economics, Vol. 106, No. 4, (November), pp. 1157-1189; Vroman, Wayne. 2002. "Low Benefit Recipiency in State Unemployment Insurance Programs," ETA Occasional Paper 2002-02, (Washington, D.C.: U.S. Department of Labor, Employment and Training Administration) and Government Accountability Office (GAO). 2006. "Unemployment Insurance: Factors Associated with Benefit Receipt," GAO-06-341, (Washington, D.C.: Government Accountability Office, March).

The second dummy variable (D1996) equals zero through 1995 and then unity in 1996 and later years. It tests for an upward shift in recipiency starting in 1996. The coefficients on both dummies show shifts in UI recipiency in an analysis that already has business cycle controls from the current and lagged unemployment rates.

Recently I completed an analysis of UI recipiency rates in the fifty states plus the District of Columbia using data spanning the years 1967 to 2005. The recipiency measure was the WBTU ratio as defined above. The results of the 51 regressions will be briefly summarized to help place results for Washington into a comparative context. (1) The overall fits of the regressions were generally modest with 33 of the adjusted R^2s (a standard goodness-of-fit measure) between 0.300 and 0.699. The median of the 51 adjusted R^2s was 0.470. On average, the regressions explained about half of the variation in the state-level WBTU ratios. The adjusted R^2 for Washington was 0.280, one of twelve that fell below 0.300. (2) Most (39 of 51) standard errors of estimate (average deviation of the actual recipiency rate from the rate projected by the regression) were smaller than 0.050. Washington's was 0.054. (3) Most of the estimated slope coefficients had expected signs and more than half were significant. The unemployment rate entered positively in 48 regressions and was significant in 38. The lagged unemployment rate entered negatively in 48 regressions and was significant in 39. The dummy variable for 1981 entered negatively in 38 regressions and it was significant in 19. The post-1995 dummy variable entered positively in 37 regressions and it was significant in 21. Across the set of 204 slope coefficients, 171 (84 percent) had expected signs and 117 (57 percent) were significant. In summary, the regressions had generally modest explanatory power, but most slope coefficients (84 percent) entered with expected signs.

Legislation affecting benefits was enacted in Washington in 2003, 2005 and 2006. Benefit provisions in the 2003 legislation started to come into force in 2004. Important element were as follows. (1) Maximum potential benefit duration was reduced from 30 weeks to 26 weeks effective in 2004. (2) The basis for computing weekly benefits was changed from using earnings during two high quarters of the base period to the three high quarters in 2004 and all four quarters in 2005. (3) The treatment of eligibility following voluntary quits was changed with several types of quits becoming disqualifying in 2004. (4) The indexing of the maximum benefit was altered, reducing it from 70 percent of

lagged statewide wages to 63 percent with a freeze on the maximum of $496 until the lower 63 percent is achieved. The four changes reduced potential benefits and/or weekly benefits for nearly all claimants.

Legislation took place in early 2005 after four quarter averaging started to be used in calculating weekly benefits. The 2005 bill restored two quarter averaging and reduced the statutory replacement rate from 52 percent of past wages to 50 percent. This legislation was to sunset in 2007 which would have reinstituted four quarter calculations and the associated benefit reductions. Legislation of 2006, however, made two quarter averaging permanent, but did not alter the calculation of the maximum benefit or the statutory replacement rate.

In addition to legislative changes, program administration has also evolved since the late 1990s. There has been a large increase in nonmonetary administrative decisions (determinations) regarding separations from employment and non-separation decisions. While the pace of such decisions has increased since 1999 and 2000, the pace accelerated noticeably after 2003. We pursue this administrative aspect below.

Equation (1) is a multiple regression to explain Washington's WBTU ratio. The regression was fitted to data extending from 1967 to 2003. The idea was to fit using a data period that preceded the recent major legislative changes. Since these first became operative in 2004, the data for estimation period was stopped at 2003.[3]

(1) $WBTU = 0.451 + 0.0139*TUR - 0.0246*TURLag + 0.0081*D1981 + 0.0422*D1996$
$\qquad$ (11.1) $\quad$ (1.9) $\qquad$ (3.4) $\qquad\qquad$ (0.4) $\qquad\qquad$ (1.7)
$\qquad$ Adjusted $R^2 = 0.358$ $\quad$ Standard Error = 0.050

Equation (1) has only modest explanatory power, explaining just more than one third of the time series variation in the WBTU ratio between 1967 and 2003. The lagged unemployment rate (TURLag) has the greatest significance, but the current unemployment rate (TUR) and the 1996 dummy variable both have expected signs and are close to significance using the usual statistical tests.[4] A higher unemployment rate initially increases and then lowers recipiency through a lagged effect. The 1996 dummy variable indicates that recipiency increased after 1996. The only instance of an unexpected sign is for the 1981 dummy variable, but this is not significant.

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[3] Very similar results were obtained when the estimation period stopped at 2001 and 2005.

Note that the standard error is 0.050 meaning that the average distance between the regression's actual and the fitted values is quite large. In eight separate years between 1967 and 2003, the regression prediction deviates from the actual WBTU ratio by more than 0.050. The eight big errors occurred in 1971, 1974, 1978, 1979, 1986, 1987, 1994 and 1995. The largest errors were an overprediction of 0.117 in 1979 and an underprediction of 0.116 in 1994. Note also that the large errors tended to occur in pairs: 1978-1979, 1986-1987 and 1994-1995.

Equation (1) was then used to project recipiency rates forward to 2004, 2005 and 2006. During these most recent three years, there is a dramatic departure of the actual WBTU ratio from the projection of the regression equation. Chart 2 shows actual WBTU recipiency rates through 2006 and projections from the regression equation. While the projections all fall between 0.40 and 0.45, the actual values descend sharply to the 0.27-0.28 range for both 2005 and 2006. The errors for these two years (0.138 and 0.159) are larger than for any of the 38 earlier years between 1967 and 2004.

How unusual are Washington's error patterns of 2004-2006? While recipiency rate data have yet to be made available by OWS for 2006, I have examined residual patterns for the state-level regressions fitted previously that were fitted with data through 2005. Analysis of these residuals showed some obvious patterns.[5] For the majority of states, the regression overpredicted recipiency in 2000 and again in 2004 and 2005. However, the regression underpredicted recipiency during 2001-2003, the recent years of highest unemployment.

Thus during the recent recession, recipiency increased more during the years of high unemployment than would have been expected from the longer historical record. During the post-recession economic recovery of 2004-2006, however, recipiency decreased more than expected. Considering the earlier recessions that occurred between the late 1960s and the early 1990s, the recipiency rate during 2000-2006 was more sensitive to the business cycle than during the earlier recessions.

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[4] Generally speaking, significance is achieved when the t ratio for a coefficient (the numbers in parentheses) is 2.0 or larger in value.
[5] Recall that the underlying regressions for each state had the same four explanatory variables as in equation (1) above (the TUR, the TUR lagged and the two dummy variables, D1981 and D1996).

The pattern of the signs in the regression residuals suggests an interesting story to the effect that UI recipiency is becoming more responsive to the business cycle. However, the residual pattern shown in Chart 2 for Washington is unusual in the scale of the projection errors made by the regression. Table 1 helps to place Washington into a broader perspective of recipiency rates across 51 UI programs.

Table 1. Errors from Recipiency Rate Regressions, 2000 to 2005

	2000	2001	2002	2003	2004	2005
1. Number Positive Errors	17	44	44	40	22	10
2. Mean Error – 51 States	-.00409	.02867	.03048	.02134	-.00585	-.02341
3. Median Error – 51 States	-.00571	.02404	.02883	.02398	-.00707	-.02314
4. Washington State Error	-.01207	.00593	.02921	.00125	-.03751	-.11587
5. Washington's Rank	34	41	25	40	42	51

Source: 51 state-level regressions fitted by author to data for the years 1967 to 2005.

Table 1 summarizes the errors from the recipiency rate regressions. Line 1 shows the number of states (out of 51) where the regression overpredicted the recipiency rate in the years 2000 to 2005. Lines 2 and 3 respectively show the mean and median of the prediction errors for each year.[6] All three lines convey the story: overpredictions (negative errors) in 2000, 2004 and 2005 and underpredictions in 2001, 2002 and 2003.

Between 2000 and 2003, the errors in Washington (line 4) are of the same general size as the average errors in lines 2 and 3. However, in 2004 the Washington error (overprediction)grows to –0.03751 and then to -0.11587 in 2005.[7] Line 5 then shows how Washington's error compares to other errors for each year. A ranking of 1 is assigned to the state with the largest positive error (underprediction) and 51 to the state with the largest negative error (overprediction). While Washington's errors are generally below average, the departure is most dramatic in 2005. Washington's overprediction of the recipiency rate is the largest across all 51 UI programs. Table 1 helps to place the size of

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[6] The averages are based on simple averages of 51 errors. There is no weighting by state size.
[7] The errors in line 4 of Table 1 are based on a regression fitted through 2005. Thus they are somewhat different from the errors implied in Chart 2 because that regression was fitted only through 2003. The differences from the two Washington regressions are very small.

Washington's overpredictions into a comparative context. In 2005 the state's overprediction error was the largest in the country. Only one other state (Connecticut) had an overprediction of as large as 0.100, but eleven other states had overprecition errors of between 0.050 and 0.099. Thus while recipiency was overpredicted in 41 states, a substantial minority had errors that were at least half as large as Washington's.

<u>Analysis of UI Administrative Activities</u>

Three kinds of program administrative decisions affect recipiency: monetary determinations, separation determinations and non-separation determinations. In recent years monetary determinations have consistently found about 90 percent of UI applicants have the requisite 680 hours of base period work experience needed for monetary eligibility. Since 2000 this monetary eligibility has never gone below 0.870 and during 2001 and 2002 it exceeded 0.940. Because of the lack of recent variation in this aspect of UI eligibility determinations, it will not be discussed further.

Separation and non-separation determinations, in contrast, have varied in ways that have obvious implications for UI eligibility and recipiency. When workers leave employment and file for UI benefits, ESD frequently makes eligibility determinations on the two major categories of job separation issues: voluntary quits and misconduct. The potential scope for disqualifications on both issues was broadened by legislation in 2003.

Denials on both separation issues and non-separation issues are fruitfully examined by focusing upon two aspects of administration: the frequency of agency decisions and the frequency of denials of those decisions. For separation issues (quits and misconduct) the metric used to gauge the frequency of separation decisions (determinations) is new spells of unemployment, a measure that sums eligible new intrastate claims, additional intrastate claims and interstate-liable claims. Each of the three situations represents job separations for which there could be a need for ESD to make a separation determination.

Table 2 displays data for Washington and national on separation determinations and denials for the years 2000 to 2006. All data on determinations and denials that underpin this table were derived from a report to ETA that each state submits quarterly. National data are included to give the reader an idea of how closely developments in Washington did or did not follow national developments during these seven years.

Table 2. Separation Decisions in Washington and Nationwide, 2000 to 2006

	Wash. V.Q Determ. Rate (1)	Wash. V.Q. Denial Rate (2)	Wash. Miscond. Determin. Rate (3)	Wash. Miscond. Denial Rate (4)	U.S. V.Q Determ. Rate (5)	U.S. V.Q. Denial Rate (6)	U.S. Miscond. Determin. Rate (7)	U.S. Miscond. Denial Rate (8)
2000	.096	.713	.096	.262	.100	.755	.128	.235
2001	.078	.739	.084	.249	.081	.762	.112	.199
2002	.087	.744	.097	.233	.087	.765	.130	.223
2003	.087	.743	.103	.215	.087	.747	.136	.227
2004	.092	.788	.114	.238	.097	.731	.161	.260
2005	.095	.799	.126	.256	.096	.731	.164	.264
2006	.103	.818	.130	.243	.098	.730	.166	.264

Source: Based on data from ETA-207 reports on nonmonetary determinations.

The data in Table 2 show that the determination rate on voluntary quits (VQ) did not vary widely either in Washington or nationwide (columns(1) and (5)) over these seven years. A small increase in Washington may have occurred in 2006 but the change was smaller than 0.01. The VQ denial rate in column (2) clearly did increase and the timing matches the timing of the 2003 legislation. It seems that when more categories of quits became disqualifying the denial rate moved upward. The increased denial rate may be about 0.08. With VQ determinations averaging about 50,000 per year, this increase would represent about 4,000 added VQ denials per year.

The misconduct determination rate clearly increased in Washington after 2003 but note in column (3) that the determination rate was also increasing in prior years. Further, observe that the trend towards higher determination rates is national. The misconduct determination rate in column (7) increased by about the same proportion as the increase in Washington. Since the misconduct denial rate (column (4)) did not change much, it is difficult to believe that the increase in the associated denials was of much importance.

On separation determinations, the increase in VQ denials was a factor contributing to the decrease in recipiency since 2003. An increase of 4,000 denials per year coupled with an average duration of, say, 8.0 weeks would suggest 32,000 fewer weeks compensated or about 600 beneficiaries per week. With TU averaging 178,000 in 2005 and 2006, the reduction in the recipiency rate would be 0.0033. If we estimate the

unexplained decrease in recipiency conservatively at about 0.100, this single factor would explain only 3.3 percent of the unexplained decrease.

Non-separation determinations and denials increased much more rapidly than separation determinations and denials between 2000 and 2006. Table 3 displays Washington data for three broad categories of non-separation issues: able and available for work, reporting requirements and "all other" a catch-all that includes refusal of suitable work, disqualifying and deductable income and some other nonseparation issues. The table displays both determination rates and denial rates. The frequency of determinations is measured relative to the number of claimant contacts, roughly weeks claimed. Most non-separation determinations affect persons who have already collected some benefits in their current benefit year. The determination rate can be viewed as the probability of having a determination during the next week of claiming benefits. Table 3 also shows the frequency of eligibility reviews (but not the associated outcomes).

Table 3. Non-separation Determinations in Washington, 2000 to 2006

	Able and Avail. Det. Rate (1)	Able and Avail. Dny Rate. (2)	Reporting Req. Det. Rate (3)	Reporting Req. Dny. Rate (4)	All Other Det. Rate (5)	All Other Denial Rate (6)	Elig. Review Det. Rate (7)
2000	.0073	.642	.0026	.729	.0056	.872	.0034
2001	.0085	.697	.0037	.725	.0050	.865	.0043
2002	.0098	.661	.0038	.722	.0029	.793	.0059
2003	.0093	.707	.0040	.661	.0030	.750	.0087
2004	.0135	.743	.079	.787	.0025	.740	.0109
2005	.0153	.787	.0143	.763	.0039	.691	0185
2006	.0155	.691	.0154	.779	.0032	.795	.0208

Source: Based on data from ETA-207 reports and ETA 5159 reports

Three sets of dermination rates in Table 3 experienced sharp increases between 2000 and 2006. The probability of an A&A determination (column (1)) roughly doubled during these seven years. The probability of a reporting requirement determination and an eligibility review (columns (3) and (7) respectively) increased roughly sixfold over this period. For each of the three determination rate series, the increases after 2003 were much larger than before 2003. A major contribution to the increased number of determinations was the reemployment and eligibility assessment (REA) pilot initiative that was active in Washington starting in 2005.

The denial rates in the even numbered columns of Table 3 were all uniformly high, averaging between 0.700 and 0.800 over the seven years. Note that the denial rates did not change much over the period. For all three types of non-separation issues, the odds of a denial were about three times the odds of an allowance. Higher determination rates have translated directly into increased denials. Total denials on non-separation issues increased by about 35,000 between 2000 and 2004-2006, from about 50,000 per year to about 85,000 per year.

At the same time, the national series analogous to those displayed in Table 3 were all quite stable between 2000 and 2006. The national able and available determination rate decreased from 0.0082 to 0.0069 while the reporting requirement determination rate increased from 0.0049 to 0.0059 and the eligibility review rate decreased from 0.0194 to 0.0150. The national denial rates for these issues were also stable. Thus the developments in Washington were not part of some broader nationwide trend in UI administration of continuing claims.

Washington increased its active oversight of continuing claims and the associated denials had to have reduced benefit recipiency with the largest negative effects in 2005 and 2006. To estimate the effects on weeks compensated and the recipiency rate, some illustrative calculations may help. The increase in able and available denials was about 20,000 and the increase in reporting requirement denials was about 30,000. Assuming the denial period for the former was one week (a one week suspension) and the latter was five weeks (a mix of suspensions and durational disqualifications) yields a total of 170,000 weeks not compensated due to these denials for an average of about 3,200 fewer beneficiaries per week.

Recall that total unemployment in Washington averaged about 178,000 for the two years 2005 and 2006. If we assume the unexplained decrease in recipiency was about 0.100 for these two years, this translates into an unexplained reduction in the weekly number of beneficiaries of about 17,800. Summing the reduction 600 from increased VQ denials with the 3,200 from increased non-separation denials yields a total of 3,800 fewer weekly beneficiaries from nonmonetary denials or about 21 percent (3,800/17,800) of the unexplained decrease in recipiency.

While this estimated share is measurable, it does not explain even one fourth of the recent unexplained decrease in recipiency. Other calculations with the nonmonetary determination data could yield different results, but it seems highly unlikely that a reworking of these data, e.g., applying different denial periods, would change the conclusion that an increase in denials cannot explain as large as one-half or one-third of the unexplained decrease in recipiency.

What is the explanation for the drop in recipiency? Besides increased administrative oversight of claimants and the associated increase in denials, two other factors can be suggested. (1) The increased administrative oversight may have demonstration effects that prevent workers from filing new claims and continuing claims. The "invitation" to appear at a one-stop for an REA interview may deter some from continuing to file to avoid what they view as a hassle. There would be no record of such situations, no non-separation determination and no eligibility review. While this would be a non-event in ESD administrative records, it would reduce recipiency.

(2) Washington's labor market has been very strong in 2005 and 2006 with unemployment rates of 5.5 percent and 4.9 percent respectively. Over the past 40 years these two unemployment rates rank tenth lowest and fifth lowest of the 40. It might be suggested that low unemployment dries up the pool of eligible claimants, decreasing recipiency because a lower share of the unemployed meet the usual eligibility criteria. Two earlier periods of low-unemployment periods were 1967-1969 and 1997-2000. In neither of these earlier periods did recipiency decrease (Racall Charts 1 and 2). Thus suggesting that low unemployment is responsible for the recent decrease in the recipiency rate does not seem very plausible.

In summary, legislation (shorter maximum benefit duration, increased VQ denials) and increased administrative oversight have contributed to the decrease in recipiency. However, the estimated size of the associated direct effects seems to explain only about one-quarter of the total decrease in recipiency of 2005 and 2006. A deterrent effect of increased administrative oversight seems likely to have contributed, but there is no easy way to assess the size of the deterrent effect. Low unemployment of 2005 and 2006 does not seem a likely contributor based on earlier experiences of 1967-1969 and 1997-2000 when low unemployment was not associated with low recipiency.